

Claim Amendments:

1. (currently amended) A method of foaming a well fluid to be introduced into a well bore penetrating a hydrocarbon containing subterranean zone comprising the steps of:

providing a foamable well fluid;

~~providing compressed air with an oxygen content~~ contacting air with an oxygen scavenger either prior to or after compressing the air to thereby reduce the oxygen content in the air to less than an amount necessary to support combustion of hydrocarbons; and

compressing the air; and then

foaming the foamable well fluid with the reduced oxygen content compressed air.

2. The method of claim 1 wherein the compressed air has less than about 12.5% oxygen content by volume.

3. The method of claim 1 wherein the compressed air has less than about 5% oxygen content by volume.

4. (canceled)

5. (currently amended) The method of claim 1 ~~4~~ wherein the oxygen scavenger is selected from the group consisting of sodium thiosulfate, sodium sulfite, sodium bi-sulfite, pyrogalllic acid, pyrogallol, catechal, sodium erthythrobate, ascorbic acid, amines, resorcinol, quinones and hydroquinones and mixtures thereof.

~~6. 7.~~ (currently amended) The method of claim 1 wherein the foamed fluid comprises from about 20% to about 80% reduced oxygen content air by volume.

~~7. 8.~~ (currently amended) The method of claim 1 wherein the foamed fluid comprises from about 20% to about 60% reduced oxygen content air by volume.

~~8. 9.~~ (currently amended) The method of claim 1 wherein the foamable well fluid further comprises water and a mixture of foaming and foam stabilization surfactants present in the range of from about 0.5% to about 5% by volume of water in the fluid.

~~9. 10.~~ (currently amended) The method of claim ~~8~~ 9 wherein the mixture of foaming and foam stabilization surfactants are present in the range of from about 1% to about 2.5% by volume of water in the fluid.

~~10. 11.~~ (currently amended) The method of claim ~~8~~ 1 wherein the foamable well fluid comprises a mixture of foaming and foam stabilization surfactants comprising an alpha-olefinic sulfonate and a cocoylamidopropyl betaine.

~~11. 12.~~ (currently amended) The method of claim ~~8~~ 1 wherein the foamable well fluid further comprises a mixture of foaming and foam stabilization surfactants comprising an ethoxylated alcohol ether sulfate of the formula  $H(CH_2)_a(OC_2H_4)_bOSO_3NH_4^+$  wherein "a" is an integer in the range of from about 6 to about 10 and "b" is an integer in the range of from about 3 to about 10, an alkyl or alkene amidopropylbetaine having the formula  $R--CONHCH_2CH_2CH_2N^+(CH_3)_2CH_2CO_2$  wherein R is a radical selected from the group consisting of decyl, cocoyl, lauryl, cetyl and oleyl and an alkyl or alkene amidopropyldimethylamineoxide having the formula  $R'--CONHCH_2CH_2CH_2N^+(CH_3)_2O^-$  wherein R' is a radical selected from the group consisting of decyl, cocoyl, lauryl, cetyl and oleyl.

~~12. 13.~~ (currently amended) The method of claim ~~11~~ 12 wherein the ethoxylated alcohol ether sulfate is present in an amount ranging from about 60 to about 64 parts by weight, the alkyl or alkene amidopropylbetaine is present in an amount ranging from about 30 to about 33 parts by weight and the alkyl or alkene amidopropyldimethylamineoxide is present in an amount ranging

from about 3 to about 10 parts by weight of the mixture of foaming and foam stabilization surfactants.

~~13.~~ 14. (currently amended) The method of claim 1 wherein the foamable well fluid is selected from the group consisting of drilling fluids, completion fluids, and stimulation fluids.

~~14.~~ 15. (currently amended) The method of claim 1 wherein the foamable well fluid is selected from the group consisting of drilling fluids ~~muds~~, well cleanup fluids, workover fluids, spacer fluids, gravel pack fluids, acidizing fluids, and fracturing fluids.

~~15.~~ 16. (currently amended) The method of claim 1 further comprising the step of introducing ~~placing~~ the resulting foamed fluid into the well bore ~~a subterranean zone~~.

~~16.~~ 17. (currently amended) ~~The method of claim 1 further comprising the step of:~~

A method of drilling, a well bore into a subterranean formation containing hydrocarbons and then completing and/or stimulating a the subterranean formation using the foamed fluid comprising the steps of:

providing a foamable well fluid;

contacting air with an oxygen scavenger either prior to or after compressing the air to thereby reduce the oxygen content in the air to less than an amount necessary to support combustion of hydrocarbons;

compressing the air;

foaming the foamable well fluid with the reduced oxygen content compressed air; and

using the foamed well fluid to drill the well bore and then complete and/or stimulate the subterranean formation.

~~17.~~ 18. (currently amended) The method of claim ~~16~~ 17 further comprising the step of producing fluid from the subterranean formation.

~~18. 19.~~ (currently amended) The method of claim ~~17 18~~ wherein the fluid produced from the formation is oil and/or gas.

~~19. 20.~~ (currently amended) A foamed well fluid composition comprising:

a well fluid; and

air contacted with an oxygen scavenger to reduce the oxygen content therein to having an oxygen content less than an amount required to support combustion of hydrocarbons, the reduced oxygen air being present in an amount sufficient to foam the fluid.

~~20. 21.~~ (currently amended) The composition of claim ~~19 20~~ wherein the air has less than about 12.5% oxygen content by volume.

~~21. 22.~~ (currently amended) The composition of claim ~~19 20~~ wherein the air has less than about 5% oxygen content by volume.

~~22. 23.~~ (canceled).

~~23. 24.~~ (currently amended) The composition of claim ~~19 23~~ wherein the oxygen scavenger is selected from the group consisting of sodium hiosulfate, sodium sulfite, sodium bi-sulfite, pyrogalllic acid, pyrogallol, catechal, sodium erthythrobate, ascorbic acid, amines, resorcinol, quinones and hydroquinones and mixtures thereof.

~~24. 25.~~ (currently amended) The composition of claim ~~19 20~~ wherein the foamed well fluid comprises from about 20% to about 80% reduced oxygen content air by volume.

~~25. 26.~~ (currently amended) The composition of claim ~~19 20~~ wherein the foamed well fluid comprises from about 20% to about 60% reduced oxygen content air by volume.

~~26. 27.~~ (currently amended) The composition of claim ~~19 20~~ wherein the foamed well fluid further comprises a mixture of foaming and foam stabilization surfactants present in the range of from about 0.5% to about 5% by volume of water in the fluid.

~~27. 28.~~ (currently amended) The composition of claim ~~26 27~~ wherein the mixture of foaming and foam stabilization surfactants are present in the range of from about 1% to about 2.5% by volume of water in the fluid.

~~28. 29.~~ (currently amended) The composition of claim ~~26 29~~ wherein the foamed well fluid comprises a mixture of foaming and foam stabilization surfactants comprising an alpha-olefinic sulfonate and a cocoylamidopropyl betaine.

~~29. 30.~~ (currently amended) The composition of claim ~~19 29~~ wherein the foamed well fluid further comprises a mixture of foaming and foam stabilization surfactants comprising an ethoxylated alcohol ether sulfate of the formula  $\text{H}(\text{CH}_2)_a(\text{OC}_2\text{H}_4)_b\text{OSO}_3\text{NH}_4^+$  wherein “a” is an integer in the range of from about 6 to about 10 and “b” is an integer in the range of from about 3 to about 10, an alkyl or alkene amidopropylbetaine having the formula  $\text{R--CONHCH}_2\text{CH}_2\text{CH}_2\text{N}^+(\text{CH}_3)_2\text{CH}_2\text{CO}_2$  wherein R is a radical selected from the group consisting of decyl, cocoyl, lauryl, cetyl and oleyl and an alkyl or alkene amidopropyldimethylamineoxide having the formula  $\text{R'--CONHCH}_2\text{CH}_2\text{CH}_2\text{N}^+(\text{CH}_3)_2\text{O}^-$  wherein R' is a radical selected from the group consisting of decyl, cocoyl, lauryl, cetyl and oleyl.

~~30. 31.~~ (currently amended) The method of claim ~~29 30~~ wherein the ethoxylated alcohol ether sulfate is present in an amount ranging from about 60 to about 64 parts by weight, the alkyl or alkene amidopropylbetaine is present in an amount ranging from about 30 to about 33 parts by weight and the alkyl or alkene amidopropyldimethylamineoxide is present in an amount ranging from about 3 to about 10 parts by weight of the mixture of foaming and foam stabilization surfactants.

~~31. 32.~~ (currently amended) The composition of claim ~~19 29~~ wherein the foamed well fluid is selected from the group consisting of drilling fluids, completion fluids, and stimulation fluids.

~~32. 33.~~ (currently amended) The composition of claim ~~19~~ 20 wherein the foamed well fluid is selected from the group consisting of drilling muds, well cleanup fluids, workover fluids, spacer fluids, gravel pack fluids, acidizing fluids, and fracturing fluids.

~~33. 34.~~ (canceled).

~~34. 35.~~ (canceled).

~~35. 36.~~ (canceled).

~~36. 37.~~ (canceled).

~~37. 38.~~ (canceled).

~~38. 39.~~ (canceled).

~~39. 40.~~ (canceled).

~~40. 41.~~ (canceled).

~~41. 42.~~ (canceled).

~~42. 43.~~ (canceled).